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| 10/043,297 | 01/14/2002 | David J. Drahos | DRAHOS-CIP | 7642 |
| 7590 03/09/2004 | | | EXAMINER | |
| MISHRILAL L. JAIN 11620 Masters Run Ellicott City, MD 21042 | | | MARX, IRENE | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1651 | |

DATE MAILED: 03/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/043,297

Applicant(s)

DRAHOS ET AL.

Examiner

Irene Marx

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 2/18/04.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 16-18 and 20 is/are rejected.
- 7) ☐ Claim(s) 19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

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The amendment filed 2/26/04 is acknowledged. Claims 16-20 are being considered on the merits.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 19 and 20 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 2-5 and 7-11 of U.S. Patent No. 6,569,425. Although the conflicting claims are not identical, they are not patentably distinct from each other because they are directed to the use of the same strain SB3086 in conjunction with a formulation comprising various ingredients, including a combination of surfactant, preservative and plant nutrients, which would naturally enhance the bioactivity possessed by the strain.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 18 and 20 are/remain rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 18 and 20 are vague, indefinite and confusing in the recitation of "710-140". There is no clear indication regarding the nature of the intended material.

Response to Arguments

Applicant's arguments have been fully considered but they are not deemed to be persuasive.

Applicant did not address this rejection.

Therefore, the rejection is maintained.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 16 and 17 remain rejected under 35 U.S.C. 102(b) as being anticipated by Urano *et al.* for the reasons as stated in the last Office action and the further reasons below.

The claims are drawn to a method of enhancing fungicidal activity of a microbial agent by applying a microorganisms with a nutrient formulation that enhances fungicidal activity.

The reference discloses a method of enhancing fungicidal activity of a microbial agent by applying a microorganisms with a nutrient formulation comprising chitin. See, e.g., Example 3, wherein the strain and the culture medium are mixed with chitin which material was applied to a pot for plants.

Response to Arguments

Applicant's arguments have been fully considered but they are not deemed to be persuasive.

Applicant argues that to be anticipated the reference “must provide the same disclosure as claimed by the invention” and that Urano *et al.* “has nothing to do with enhancing biofungicidal activity of a microbial agent”. With all due respect, it is noted that the concept of “enhancing

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fungicidal activity” is broadly defined in the specification as to mean that the biofungicidal activity of a microbial agent is “significantly or substantially greater” when applied in association or combination with the nutrient formulation than that obtained without the use of the nutrient formulation. Yet there is nothing on the record to suggest that Urano *et al.* do not obtain a “substantially greater” fungicidal enhancement with a composition comprising the strain in combination with yeast extract and peptone and chitin than without these ingredients in the composition. The claim is anticipated because each element of the claim is found, either expressly described or under principles of inherency, in the single prior art reference.

With respect to the properties of chitin, Encyclopaedia Britannica online defines chitin as:

“white, horny substance found in the outer skeleton of insects, crabs, and lobsters and in the internal structures of other invertebrates. It is a polysaccharide consisting of units of the amino sugar glucosamine. As a by-product of crustacean processing, **chitin** is used as a flocculating agent for waste water, a wound-healing agent, a thickener and stabilizer for foods and pharmaceuticals, an ion-exchange resin, a membrane for chromatography and electrodialysis, a binder for dyes, fabrics, and adhesives, and a sizing and strengthening agent for paper.”

The flocculating properties are deemed to read on “surfactant” activity and its stabilization properties are deemed to read on “preservative” activity. The yeast extract and peptone are suitable as plant nutrients as amino acid and/or nitrogen sources. Therefore, the composition provided comprises the required ingredients, i.e. a surfactant, a plant nutrient and a preservative in some amount which is non-toxic.

Therefore the rejection is deemed proper and it is adhered to.

Claims 16 and 17 remain rejected under 35 U.S.C. 102(b) as being anticipated by Handelsman *et al.* for the reasons as stated in the last Office action and the further reasons below.

The claims are drawn to a method of enhancing fungicidal activity of a microbial agent by applying a microorganisms with a nutrient formulation that enhances fungicidal activity.

The reference discloses a method of enhancing fungicidal activity of a microbial

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agent by applying a microorganisms with a nutrient formulation comprising methyl cellulose, See, e.g., Example 1. In Example 2, the strain and a nutrient formulation comprising trypticase soy culture medium are mixed with seeds.

Response to Arguments

Applicant's arguments have been fully considered but they are not deemed to be persuasive.

In response to applicant's argument that the reference is directed to enhancing nodulation while the invention is directed to biofungicidal activity, it is noted that *Bacillus* strain ATCC 53522 has antifungal activity. See, e.g., col. 3, line 54 to col. 4, line 10. With all due respect, it is noted that the concept of "enhancing fungicidal activity" is broadly defined in the specification as to mean that the biofungicidal activity of a microbial agent is "significantly or substantially greater" when applied in association or combination with the nutrient formulation than that obtained without the use of the nutrient formulation. Yet there is nothing on the record to suggest that Handelsman *et al.* do not obtain a "substantially greater" fungicidal enhancement with a composition comprising the strain in combination with methyl cellulose and trypticase soy broth than without these ingredients in the composition. The claim is anticipated because each element of the claim is found, either expressly described or under principles of inherency, in the single prior art reference.

Note also that the fungus combined with methyl cellulose, a surfactant, was provided with TSB or trypticase soy broth, suitable as plant nutrient, since it is an amino acid or nitrogen source for the plants. In addition, it is submitted that methyl cellulose is a stabilizing agent, which would naturally serve as a preservative. Therefore, the composition provided comprises the required ingredients, i.e. a surfactant, a plant nutrient and a preservative in some amount which is non-toxic.

Therefore the rejection is deemed proper and it is adhered to.

Claims 18-20 are free of the art of record.

Claim 19 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

No claim is allowed.

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Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Irene Marx whose telephone number is (571) 272-0919. The examiner can normally be reached on M-F (6:30-3:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Wityshyn can be reached on (571) 272-0926. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Irene Marx
Primary Examiner
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